



**United States Steel**  
Minnesota Ore Operations  
Minntac

United States Steel Corporation  
P.O. Box 417  
Mountain Iron, MN 55768

Barbara Walther  
U.S. Army Corps of Engineers  
180 5th St. East  
St. Paul, MN 55101

RE: United States Steel Corporation, Minnesota Ore Operations  
Request to Modify Permits 2012-02481-JCB, 2010-00832-JCB and MBI  
Final Palisade Modifications Plan

Dear Ms. Walther,

United States Steel Corporation (U. S. Steel) is requesting that the following permits and agreement be modified:

- Keetac Expansion Permit 2012-02481-JCB
- Minntac Western Progression Permit 2010-00832-JCB
- Palisade III Mitigation Banking Instrument (MBI) (2011-04159-JCB)

The requested revisions are the result of proposed modifications to United States Steel Corporation's (U. S. Steel) Palisade Wetland Mitigation Site. The Palisade Modifications Plan is attached to this request as Appendix A.

The requested revisions for each permit are detailed separately in the attached summaries.

If you have any questions or require additional information, please feel free to contact Tracy Muck at (218) 778-8672 or via email at [tmuck@uss.com](mailto:tmuck@uss.com).

Sincerely,

Lawrence Sutherland  
General Manager – Minnesota Ore Operations  
United States Steel Corporation

**Keetac Expansion Permit 2012-02481-JCB  
Requested Modifications Summary**

Palisade I (PI) is an 815-acre project specific mitigation site originally developed to mitigate impacts associated with the Keetac Expansion Project. Modifications to P1 include abandoning several ditch segments, reducing total site boundary to encompass 735 acres, and revising wetland types and acreage.

**Project Location**

This section of the permit should be modified as follows:

**PALISADES I**

NW ¼ of SW ¼ of Section 27, Township 49 north, Range 24 west;  
S ½ of the S ½ of Section 28, Township 49 north, Range 24 west;  
Portions of the NE ¼ of Section 32, Township 49 north, Range 24 west;  
N ½ of Section 33, Township 49 north, Range 24 west;  
Portions of the SW ¼ of the NW ¼ of Section 34, Township 49 north, Range 24 west; and  
W ½ of the SW ¼ of Section 34, Township 49 north, Range 24 west

**General Condition 1**

This section of the permit should be modified, in part, as follows:

*The time limit for completing the work authorized ends **December 31, 2035**.*

**Special Condition 18**

This section of the permit should be modified, in part, as follows:

*Direct wetland impacts authorized by this permit are shown in figures 2008-02481-JCB MODIFICATION pages 1 of 9 through 9 of 9, attached to this permit. The total authorized permanent direct impacts to waters of the US for the Keetac Expansion phase II project is **581.79 acres (545.03 acres at the Keetac Mine Site and 36.76 acres at the Palisades I mitigation site)**. The attached map, 2008-02481-JCB MODIFICATION page 1 of 9, shows the Keetac Mine site project area. The authorized work in wetlands and deep water habitat at the Keetac Mine is shown on the attached table and maps labeled 2008-02481-JCB MODIFICATION page 2 of 9 through 8 of 9. The authorized work in wetlands at the Palisades I mitigation site is shown on the attached map labeled 2008- 02481-JCB MODIFICATION page 9 of 9 through 9 of 9.*

**Special Condition 19**

This section of the permit should be modified, in part, as follows:

*As compensation for the wetland impacts **as described in Special Condition 18**, you shall complete project-specific wetland mitigation at the **735-acre** Palisades I site. Specifically, you shall restore and rehabilitate **417.38 acres** of fresh wet / sedge meadow, **15.15 acres** of hardwood swamp, **91.94 acres** of shrub-carr, and **69.48 acres** of shallow marsh wetland plant communities as well as **83.53 acres** of native upland prairie. This work shall be completed in*

accordance with **the Palisade Modifications Plan attached in Appendix A**, which describes the proposed construction, wetland and upland establishment, and long-term maintenance and monitoring at the Palisades I site.

#### **Special Condition 20**

This section of the permit should be modified, in part, as follows:

***The plans for site re-grading, seeding and planting are included in the Palisade Modifications Plan attached in Appendix A. You shall submit both an as-built survey and report within 60 days of completion of proposed site re-grading at the Palisades I site. Within 90 days of receipt of the as-built survey the Corps will notify you, in writing, whether the plans are in compliance with this permit and the Palisade Modifications Plan, and will describe any changes needed.***

#### **Special Condition 21**

This section of the permit should be modified, in part, as follows:

***Annual mitigation monitoring reports for the Palisades I site shall be submitted on the status of the mitigation. At a minimum, the reports shall be submitted by January 31 following each of the first five growing seasons after site modifications are completed (expected in 2016). The content of the monitoring reports shall follow the monitoring plan described in Section 5 of Appendix A. Unless otherwise directed by the Corps, an abbreviated report addressing the shrub-carr wetlands and forested wetlands shall be submitted following the eighth growing season and for forested wetlands following the tenth growing season. The abbreviated reports shall also be submitted by January 31 following the eighth and tenth growing seasons.***

#### **Special Condition 22**

This section of the permit should be modified as follows:

***Hydrology and vegetation monitoring shall be completed in accordance with the monitoring plan in Section 5 of Appendix A.***

- a. If ponding of more than 6 inches occurs for a longer duration than 30 days after normal or below-normal precipitation during the first four growing seasons after construction, USS shall prepare a plan for corrective actions. The corrective action plan may include actions to reduce ponding, measures to ensure native vegetation establishment in the ponded areas, credit reductions for ponded areas, or other measure agreed upon by the Corps.***

#### **Special Condition 23**

***A Final Site Report shall be submitted when the final performance standards (as shown in Special Condition 24) are met for all community types. The final report would likely be prepared following the tenth year after site modifications and re-grading, when shrub and forested swamp communities have met the final vegetation performance standards. The Final Site Report shall include the following information:***

- a. A summary of the planting success in each plant community based on current findings.***
- b. A summary of invasive species found on site, including percent cover and location(s).***
- c. A list, description, and location of any erosion.***

- d. A list, description and location of any ponding onsite that exceeds the performance standards described in **Special Condition 22(a)**.
- e. A description of any vandalism or encroachment issues.
- f. **A map of the plant communities (based on standards currently met for each type) and ditches.**
- g. A description of compliance with the recorded conservation easement.
- h. A list of any other long-term management issues identified during the final site visit.
- i. **A wetland delineation shall be completed before final certification of any of the plant communities. The wetland delineation shall include the full mitigation site and shall apply the Corps of Engineers Wetlands Delineation Manual, the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral/Northeast Region (current version) and other relevant guidance shall be submitted.**

#### Special Condition 24

This section of the permit should be modified as follows:

**Performance standards. The site must meet the following performance standards in order to fully offset the permanent loss of wetlands at the Keetac site as described in Special Condition 18:**

##### a. HYDROLOGY

- i. **Hardwood Swamps and Shrub-Carrs.** Hydrology shall consist of a water table within **12 inches of the surface, to inundation by up to 6 inches of water, for a minimum of 28 consecutive days or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). Inundation by up to 12 inches of water during the growing season shall not occur except following a 10-year frequency or greater storm/flood event. Inundation by up to 12 inches of water shall have duration of less than 14 days, except in areas with hummocky micro-topography where hollows between hummocks can have standing water at depths of 6 to 12 inches for an extended duration.**
- ii. **Fresh (Wet) Meadow.** Hydrology shall consist of a water table at or within 12 inches of the surface for a minimum of 28 consecutive days, or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). **The duration of any inundation event during the growing season shall be less than 14 days and the depth of inundation shall be 6 inches or less except following a 10-year frequency or greater storm/flood event.** An exception can be made for sites with hummocky microtopography – hollows between hummocks can have standing water depths of up to 6 inches for an extended duration.
- iii. **Sedge Meadow.** Hydrology shall consist of a water table within 12 inches of the surface, to inundation by up to 6 inches of water, for a minimum of 28 consecutive days or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). Inundation by up to 12 inches of water during the growing season shall not occur except following a 10-year frequency or greater storm/flood event. Inundation of 6 to 12 inches of water shall have duration of less than 14 days, except in areas with hummocky micro-

*topography where hollows between hummocks can have standing water at depths of up to 12 inches for an extended duration.*

- iv. Shallow Marsh. Hydrology shall consist of a water table at the surface, to inundation by up to 6 inches of water, for a minimum of 56 consecutive days or two periods of 28 consecutive days or four periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). During the growing season, inundation by up to 18 inches of water following the 2-year or greater storm/flood may occur.*

**b. VEGETATION**

**i. Fresh (Wet) Meadow**

***Interim 1:***

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.*

***Interim 2:***

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover. Invasive species cover shall be no more than 25 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

***Final:***

*This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.*

**ii. Sedge Meadow**

***Interim 1:***

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover and at least 20 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families. Un-vegetated areas may cover no more than 40 percent of the community extent.*

***Interim 2:***

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover and at least 30 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

***Final:***

***This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover and at least 40 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.***

***iii. Shallow Marsh***

***Interim 1:***

***This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 50 percent of the community extent.***

***Interim 2:***

***This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 30 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.***

***Final:***

***This community must contain a minimum of 12 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 30 percent of the community extent.***

***iv. Shrub Swamp (Shrub Carr/Alder Thicket)***

***Interim 1:***

***This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.***

***Interim 2:***

***This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.***

***Final:***

***This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated***

*areas may cover no more than 10 percent of the community extent. A minimum of 200 live woody stems per acre of NNI shrub species must be present.*

**v. Wooded Swamp (Forested Wetland)**

**Interim 1:**

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent. The community must contain a minimum of 150 live woody stems per acre of NNI tree species and at least 100 NNI trees per acre that are at least 4-feet tall.*

**vi. Upland Native Prairie**

**Interim 1:**

*This community must contain a minimum of 10 NNI species that comprise no less than 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 15 NNI species that comprise no less than 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 20 NNI species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.*

## Special Condition 27

This section of the permit should be modified, in part, as follows:

The permittee shall ensure an initial amount of **\$2,010,200** remains in the escrow account within 30 days of the issuance of this permit. The Corps shall refund any excess amount in the account, if necessary, within 30 days of the issuance of this permit. This Special Condition in no way limits the requirement of the Permittee to complete the restoration and rehabilitation of the Palisades I site in compliance with this permit.

- c. **If the District Engineer determines that the restoration and rehabilitation of the Palisades I site is satisfying interim mitigation goals, he or she will authorize the release of a specified amount from the escrow account, as follows: escrow**
  - i. **Following site construction and Certification of the As-built - The Corps will review the submittal of as-built drawings to determine compliance with 1) the approved grading / engineering plan, as required in Special Condition 20, above; and 2) the approved seeding and planting plans, as required in Special Condition 20, above. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Condition 20, above, the District Engineer will certify in writing to the Escrow Agent that \$1,022,100 (the estimated cost of construction and grading) from the escrow account shall be released to the Permittee.**
  - ii. **Interim Vegetation Standards #1 – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as required in Special Condition 21, above; 2) hydrology performance standards, as shown in Special Condition 24, for each community type; and 3) the Interim 1 vegetation performance standards as listed in Special Condition 24, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 21, 22, and 24, above, the District Engineer will certify in writing to the Escrow Agent that up to \$395,240 (40% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional to the area meeting the performance standards.**
  - iii. **Interim Vegetation Standards #2 – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as required in Special Condition 21, above; 2) hydrology performance standards, as shown in Special Condition 24, for each community type; and 3) the Interim 2 vegetation performance standards as listed in Special Condition 24, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 21, 22, and 24, above, the District Engineer will certify in writing to the Escrow Agent that up to \$395,240 (40% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional**

to the area meeting the performance standards. The District Engineer may also certify release of funds held from previous escrow releases.

- iv. **Final Vegetation Standards** – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as required in Special Condition 21, above; 2) hydrology performance standards, as shown in Special Condition 24, for each community type; and 3) the Final vegetation performance standards as listed in Special Condition 24, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 21, 22, and 24, above, the District Engineer will certify in writing to the Escrow Agent that up to \$98,810 (10% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional to the area meeting the performance standards. The District Engineer may also certify release of funds held from previous escrow releases.
- v. **Final Site Report**– The Permittee shall complete and submit to the Corps a Final Site Report for the Palisades I site, as described in Special Condition 23, above. The report shall be submitted no later than **January 31** following the most recent full growing season during which all standards have been met for all communities on the site. Along with the submittal of the Final Site Report, the Permittee may request in writing, release of the remaining balance of the escrow account, including any remaining accrued interest.

**Minntac Progression Permit 2010-00832-JCB**  
**Requested Modifications Summary**

Palisade II (PII) is a 118.43-acre project specific mitigation site originally developed to mitigate impacts associated with the Minntac Progression Project. Modifications to PII include abandoning several ditch segments, reducing total site boundary to encompass 118.43 acres, and revising wetland types and acreage.

**Project Description**

This section of the permit should be modified as follows:

*You are authorized to **permanently** discharge dredged and fill material into 75.41 acres of wetlands for the expansion of Minntac's western mine pit.*

*You are also authorized to permanently impact 1.05 acres of wetlands acres of wetlands for the construction of the No. 6 Sump Dewatering Flow Alternative Process Makeup Water Source Project. Of these authorized impacts, 0.36 acres are located outside of the previously permitted Minntac Extension boundary (2012-00415-JCB) and 0.69 acres are located inside the boundary. These impacts have already been mitigated via the Palisade III Bank Site. You are also authorized to **retain dredged and fill material placed in 5.2 acres of wetlands.***

*In addition, you are authorized to temporarily discharge dredged and fill material into 1.36 acres of wetlands for construction of the No. 6 Sump Dewatering Flow Alternative Process Makeup Water Source Project. Of these authorized impacts, 0. 64 acres are located outside of the previously permitted Minntac Extension boundary (2012-00415-JCB) and 0.75 acres are located inside the boundary. No. 6 Sump wetland impacts are summarized in the table below.*

Sump 6 Wetland Impacts			
Permanent impacts			
Wetland Type	Wetland ID	Area (acres)	
		Outside Permitted Mine Limits	Inside Permitted Mine Limits (also permitted by Extension Permit 2012-00415-JCB)
Shrub carr/Alder Thicket	B-6-49	0.02	-
	C-6-32	-	0.08
	C-6-61	0.18	0.60
<i>Shrub carr / Alder Thicket total</i>		<i>0.2</i>	<i>0.69</i>
Hardwood swamp	B-7-55	0.16	-
<i>Hardwood swamp total</i>		<i>0.16</i>	<i>-</i>
<b>Total permanent impacts</b>		<b>0.36</b>	<b>0.69</b>
Temporary impacts			
Wet/Sedge Meadow	C-2-29	0.02	0.001
<i>Wet/Sedge Meadow total</i>		<i>0.02</i>	<i>0.001</i>

Shrub carr/Alder Thicket	B-6-49	0.04	-
	C-6-32	-	0.06
	C-6-33	-	0.02
	C-6-61	0.41	0.66
<i>Shrub carr / Alder Thicket total</i>		<i>0.44</i>	<i>0.74</i>
Hardwood swamp	B-7-55	0.15	-
	C-6-61	0.03	-
<i>Hardwood swamp total</i>		<i>0.18</i>	<i>-</i>
<b>Total temporary impacts</b>		<b>0.64</b>	<b>0.75</b>
<b>Total Sump 6 wetland impacts</b>		<b>1</b>	<b>1.43</b>

*The project will permanently and adversely impact the following wetland plant communities: 5.60 acres of fresh (wet) meadow/sedge meadow, **34.47** acres of alder thicket/shrub carr, and **41.96** acres of hardwood swamp. The total authorized discharges of dredged and fill material into wetlands (after-the-fact and currently authorized) for the Minntac Progression Project is **82.03** acres.*

#### **Project Location**

This section of the permit should be modified as follows:

E ½ of the NW ¼ of Section 32, Township 49 north, Range 24 west; and  
Portions of the NW ¼ of the NE ¼ of Section 32, Township 49 north, Range 24 west

#### **General Condition 1**

This section of the permit should be modified, in part, as follows:

*The time limit for completing the work authorized ends on December 31, 2025.*

#### **Special Condition 13**

This section of the permit should be modified, in part, as follows:

*As compensation for impacts to **80.97** acres of wetlands associated with the western pit progression and the No. 6 Sump construction, you shall complete project-specific wetland mitigation at the **118.43-acre** Palisade II site in Aitkin County.*

- a. Specifically, you shall restore and rehabilitate **16.45** acres of fresh wet meadow/sedge meadow wetlands, **33.02** acres of shrub-carr wetlands, **43.78** acres of hardwood swamp wetlands, and **17.93** acres of native upland prairie (also referred to as upland berms).*
- b. This restoration and rehabilitation work shall be done in accordance with the “Wetland Mitigation Site Modifications Plan for Palisade Wetland Mitigation Sites I, II, and III– May 2015.” See Attachment A.*

#### Special Condition 14

This section of the permit should be modified, in part, as follows:

*You shall submit both an as-built survey and seeding and planting plans within **60** days of completion of earthwork at the Palisade II site. Within 90 days of receipt of the as-built survey/engineering plan and seeding and planting plans, the Corps will notify you, in writing, whether the plans are in compliance with this permit and the Mitigation Plan, and will describe any changes needed.*

#### Special Condition 15

This section of the permit should be modified as follows:

*Annual mitigation monitoring reports for the Palisades II site shall be submitted on the status of the mitigation. At a minimum, the reports shall be submitted by **January 31** following each of the first five growing seasons **after site modifications are completed (expected in 2016)**. **The content of the monitoring reports shall follow the monitoring plan described in Section 5 of Appendix A.** Unless otherwise directed by the Corps, an abbreviated report addressing the shrub-carr wetlands and forested wetlands shall be submitted following the eighth growing season and for forested wetlands following the tenth growing season. The abbreviated reports shall also be submitted by **January 31** following the eighth and tenth growing seasons.*

#### Special Condition 16

This section of the permit should be modified as follows:

***A Final Site Report shall be submitted when the final performance standards (as shown in Special Condition 19) are met for all community types. The final report would likely be prepared following the tenth year after site modifications and re-grading, when shrub and forested swamp communities have met the final vegetation performance standards. The Final Site Report shall include the following information:***

- a. A summary of the planting success in each plant community based on current findings.*
- b. A summary of invasive species found on site, including percent cover and location(s).*
- c. A list, description, and location of any **erosion**.*
- d. A list, description and location of any ponding onsite that exceeds the performance standards described in **Special Condition 17(a)**.*
- e. A description of any vandalism or encroachment issues.*
- f. A map of the plant communities (based on standards currently met for each type) and ditches.***
- g. A description of compliance with the recorded conservation easement.*
- h. A list of any other long-term management issues identified during the final site visit.*
- i. A wetland delineation shall be completed before final certification of any of the plant communities. The wetland delineation shall include the full mitigation site and shall apply the Corps of Engineers Wetlands Delineation Manual, the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral/Northeast Region (current version) and other relevant guidance shall be submitted.***

## Special Condition 17

**Hydrology and vegetation monitoring shall be completed in accordance with the monitoring plan in Section 5 of Appendix A.**

- a. **If ponding of more than 6 inches occurs for a longer duration than 30 days after normal or below-normal precipitation during the first four growing seasons after construction, USS shall prepare a plan for corrective actions. The corrective action plan may include actions to reduce ponding, measures to ensure native vegetation establishment in the ponded areas, credit reductions for ponded areas, or other measure agreed upon by the Corps.**

## Special Condition 19

This section of the permit should be modified as follows:

### a. HYDROLOGY

- j. **Hardwood Swamps and Shrub-Carrs. Hydrology shall consist of a water table within 12 inches of the surface, to inundation by up to 6 inches of water, for a minimum of 28 consecutive days or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). Inundation by up to 12 inches of water during the growing season shall not occur except following a 10-year frequency or greater storm/flood event. Inundation by up to 12 inches of water shall have duration of less than 14 days, except in areas with hummocky microtopography where hollows between hummocks can have standing water at depths of 6 to 12 inches for an extended duration.**
- ii. **Fresh (Wet) Meadow. Hydrology shall consist of a water table at or within 12 inches of the surface for a minimum of 28 consecutive days, or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). The duration of any inundation event during the growing season shall be less than 14 days and the depth of inundation shall be 6 inches or less except following a 10-year frequency or greater storm/flood event. An exception can be made for sites with hummocky microtopography – hollows between hummocks can have standing water depths of up to 6 inches for an extended duration.**
- iii. **Sedge Meadow. Hydrology shall consist of a water table within 12 inches of the surface, to inundation by up to 6 inches of water, for a minimum of 28 consecutive days or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). Inundation by up to 12 inches of water during the growing season shall not occur except following a 10-year frequency or greater storm/flood event. Inundation of 6 to 12 inches of water shall have duration of less than 14 days, except in areas with hummocky microtopography where hollows between hummocks can have standing water at depths of up to 12 inches for an extended duration.**
- iv. **Shallow Marsh. (If this community type develops on the PII site) Hydrology shall consist of a water table at the surface, to inundation by up to 6 inches of water,**

*for a minimum of 56 consecutive days or two periods of 28 consecutive days or four periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). During the growing season, inundation by up to 18 inches of water following the 2-year or greater storm/flood may occur.*

**b. VEGETATION**

**vii. Fresh (Wet) Meadow**

**Interim 1:**

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover. Invasive species cover shall be no more than 25 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.*

**viii. Sedge Meadow**

**Interim 1:**

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover and at least 20 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families. Un-vegetated areas may cover no more than 40 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover and at least 30 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover and at least*

*40 percent of the total vegetative areal cover is comprised of species from the Cyperaceae and Juncaceae families with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.*

**ix. Shallow Marsh (If this community type develops on the PII site)**

**Interim 1:**

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 50 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 30 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 12 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 30 percent of the community extent.*

**x. Shrub Swamp (Shrub Carr/Alder Thicket)**

**Interim 1:**

*This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.*

**Interim 2:**

*This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.*

**Final:**

*This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent. A minimum of 200 live woody stems per acre of NNI shrub species must be present.*

**xi. Wooded Swamp (Forested Wetland)**

***Interim 1:***

***This community must contain a minimum of 6 NNI hydrophytic species that comprise at least 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.***

***Interim 2:***

***This community must contain a minimum of 10 NNI hydrophytic species that comprise at least 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.***

***Final:***

***This community must contain a minimum of 15 NNI hydrophytic species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent. The community must contain a minimum of 150 live woody stems per acre of NNI tree species and at least 100 NNI trees per acre that are at least 4-feet tall.***

***xii. Upland Native Prairie***

***Interim 1:***

***This community must contain a minimum of 10 NNI species that comprise no less than 40 percent of the total vegetative areal cover. Un-vegetated areas may cover no more than 40 percent of the community extent.***

***Interim 2:***

***This community must contain a minimum of 15 NNI species that comprise no less than 60 percent of the total vegetative areal cover with a maximum of 25 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 20 percent of the community extent. This performance standard must be met for two consecutive years in order to initiate the associated credit release.***

***Final:***

***This community must contain a minimum of 20 NNI species that comprise at least 80 percent of the total vegetative areal cover with a maximum of 10 percent of the total vegetative areal cover of invasive species. Un-vegetated areas may cover no more than 10 percent of the community extent.***

**Special Condition 22**

This section of the permit should be modified, in part, as follows:

The permittee shall ensure an initial amount of **\$434,400** remains in the account within 30 days of the issuance of this permit. The Corps shall refund any excess amount in the account, if

necessary, within 30 days of the issuance of this permit. This Special Condition in no way limits the requirement of the Permittee to complete the restoration and rehabilitation of the Palisades II site in compliance with this permit.

**a. If the District Engineer determines that the restoration and rehabilitation of the Palisades II site is satisfying interim mitigation goals, he or she will authorize the release of a specified amount from the escrow account, as follows:**

- i. Following site construction and Certification of the As-built - The Corps will review the submittal of as-built drawings to determine compliance with 1) the approved grading / engineering plan, as required in Special Condition 14, above; and 2) the approved seeding and planting plans, as required in Special Condition 14, above. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Condition 14, above, the District Engineer will certify in writing to the Escrow Agent that \$182,500 (the estimated cost of construction and grading) from the escrow account shall be released to the Permittee.**
- ii. Interim Vegetation Standards #1 – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as required in Special Condition 15, above; 2) hydrology performance standards, as shown in Special Condition 19, for each community type; and 3) the Interim 1 vegetation performance standards as listed in Special Condition 19, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 15, 17, and 19, above, the District Engineer will certify in writing to the Escrow Agent that up to \$100,760 (40% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional to the area meeting the performance standards.**
- iii. Interim Vegetation Standards #2 – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as required in Special Condition 15, above; 2) hydrology performance standards, as shown in Special Condition 19, for each community type; and 3) the Interim 2 vegetation performance standards as listed in Special Condition 19, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 15, 17, and 19, above, the District Engineer will certify in writing to the Escrow Agent that up to \$100,760 (40% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional to the area meeting the performance standards. The District Engineer may also certify release of funds held from previous escrow releases.**
- iv. Final Vegetation Standards – The Corps will review the submittal of monitoring reports and complete any necessary site visits to determine compliance with the requirements for 1) complete monitoring reports, as**

required in Special Condition 15, above; 2) hydrology performance standards, as shown in Special Condition 19, for each community type; and 3) the Final vegetation performance standards as listed in Special Condition 19, for each community type. If the Corps determines, in its sole discretion, that the Permittee is in compliance with Special Conditions 15, 17, and 19, above, the District Engineer will certify in writing to the Escrow Agent that up to \$25,190 (10% of the estimated 3-year maintenance and monitoring costs) from the escrow account shall be released to the Permittee in an amount proportional to the area meeting the performance standards. The District Engineer may also certify release of funds held from previous escrow releases.

- v. Final Site Report– The Permittee shall complete and submit to the Corps a Final Site Report for the Palisades II site, as described in Special Condition 16, above. The report shall be submitted no later than **January 31** following the most recent full growing season during which all standards have been met for all communities on the site. Along with the submittal of the Final Site Report, the Permittee may request in writing, release of the remaining balance of the escrow account, including any remaining accrued interest.

**Palisade III Mitigation Banking Instrument (MBI)  
Requested Modifications Summary**

**PALISADE III**

**S ½ of the SW ¼ of Section 27, Township 49 north, Range 24 west;**

**E ½ of the SW ¼ of Section 34, Township 49 north, Range 24 west;**

**S ½ of the NE ¼ of Section 34, Township 49 north, Range 24 west;**

**NW ¼ of Section 34, Township 49 north, Range 24 west;**

**SE ¼ of Section 34, Township 49 north, Range 24 west;**

**Compensation Site Plan**

This section should be modified, in part, as follows:

- a. *The Bank Site is a **553.13**-acre agricultural site that previously contained approximately 98% wetlands before it was ditched in the 1970's and farmed beginning in the 1980's.*
- b. *The work proposed at the Palisade III site is described in the following document, **referred to herein as "the Modifications Plan" or "the Plan": "Wetland Mitigation Site Modifications Plan Sites I, II and III."** (Attached as **Appendix A**) The purpose of this work, and the objective of the Bank, is to restore the functions of **408.68** acres of fresh (wet) meadow, sedge meadow, shrub carr, and hardwood swamp wetlands.*
- c. *The Corps, at its sole discretion after considering comments from the IRT and the Sponsor, will determine the number of credits generated by this Bank. The projected amount of wetland credits from this Bank by wetland and compensation type are summarized in the following table based on data presented in the Modifications Plan (**Appendix A, Section 8**).*

**Table 1 – Wetland Credits Summary**

<u>Type of Compensation</u>	<u>Number of Acres</u>	<u>Type of Wetland Credit</u>	<u>Final Projected Credits</u>
Restoration of vegetation and hydrology (1:1 ratio, ac:credit)	9.58	Wet/Sedge Meadow	9.58
Restoration of vegetation and hydrology (1.11:1, ac:credit)	399.10	Wet/Sedge Meadow; Hardwood Swamp; Shrub-carr; Shallow marsh	359.20
<b><i>Wetland Subtotal</i></b>	<b><i>408.68</i></b>		<b><i>368.78</i></b>
Upland buffer, native, non-invasive (4:1 ratio, ac:credit; but may not contribute more than 25% of the total bank credits)	118.62	Upland Buffer	29.66
Other Areas of the Site – No Credits Available	25.83	None	0
<b><i>Total</i></b>	<b><i>553.13</i></b>		<b><i>398.44</i></b>

- d. *The Sponsor shall submit annual monitoring reports to the Corps. The monitoring reports shall **be submitted according to the schedule presented in Table 5-1 in Appendix A. Each report shall include data and photographs on vegetation and hydrology, as specified in the monitoring requirements outlined in Appendix A (Section 5).** The Corps, in consultation with the IRT, may shorten or extend the monitoring period based on whether the Bank Site is in compliance with the performance standards specified in the Plan.*
- f. *The purpose of the corrective measures shall be to achieve the **performance standards** specified in **Appendix A (Section 6).***

### Release of Credits

This section should be modified, in part, as follows:

- c. The Sponsor may petition the Corps for the release of bank credits by submitting a request for certification and deposit of credits in accordance with the following schedule, as summarized in Table 2 and described in greater detail in Section 8 of the Modifications Plan (Appendix A):
- ***Initial Credit Releases – Percentages are based on the additional credits Proposed in the Modifications Plan (credits not previously anticipated from the site):***
    - *5% upon signing of MBI*
    - *10% upon Corps approval of construction based on Sponsor submittal of an as-built survey within 60 days of completion of earthwork.*
  - ***Future Credit Releases – Percentages are based on the total unreleased credits remaining after the Initial Credit Releases (total unreleased credits remaining from the site):***
    - *25% after Second Interim Vegetation Standards are met*
    - *30% after Final Vegetation Standards are met*
    - *30% after Hydrology Performance Standards are met for two consecutive years.*
    - *15% after the Final Delineation and Monitoring report has been submitted and approved.*

Table 2 – Credit Release Schedule Summary

Release Standard	Wet/sedge meadow	Shrub carr	Hardwood swamp	Shallow marsh	Total <sup>1</sup>
<b>Previous Credit Releases Based on RIBITS Credit Ledger</b>					
<b>Potential credits available from P3 site (original)</b>	<b>226.83</b>	<b>14.78</b>	<b>28.45</b>	<b>-</b>	<b>270.06</b>
<b>MBI execution (Released 2013)</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>-</b>	
<b>As-built approval (Released (2013)</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>-</b>	
<b>First interim vegetation standard met (Released 2014)</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>	<b>-</b>	
<b>Total Credits Released to Date</b>	<b>68.68</b>	<b>4.48</b>	<b>8.62</b>	<b>-</b>	<b>81.78</b>

<b>Potential credits remaining in Corps Ledger</b>	<b>158.15</b>	<b>10.30</b>	<b>19.83</b>	<b>0</b>	<b>188.28</b>
<b>Credit Releases Based on Proposed Modifications to the MBI</b>					
<b>Additional Proposed Credits from Modifications</b>	<b>125.09</b>	<b>(5.01)</b>	<b>(15.46)</b>	<b>23.76</b>	<b>128.38</b>
<b>Execution of the Modified MBI</b>	<b>5%</b>	<b>N/A</b>	<b>N/A</b>	<b>5%</b>	<b>5%</b>
<b>Modifications as-built approval</b>	<b>10%</b>	<b>N/A</b>	<b>N/A</b>	<b>10%</b>	<b>10%</b>
<b>New Credits released (15%)</b>	<b>18.76</b>	<b>0</b>	<b>0</b>	<b>3.56</b>	<b>19.26</b>
<b>New credits remaining after modifications as-built approval</b>	<b>106.32</b>	<b>(5.01)</b>	<b>(15.46)</b>	<b>20.19</b>	<b>106.05</b>
<b>Remaining Credit Releases using Performance Criteria (based on remaining credits)</b>					
<b>Total Credits Remaining = Potential Credits in Corps Ledger +New credits</b>	<b>264.47</b>	<b>5.29</b>	<b>4.37</b>	<b>20.19</b>	<b>294.33</b>
<b>Second interim vegetation standard met</b>	<b>25%</b>	<b>25%</b>	<b>25%</b>	<b>25%</b>	<b>25%</b>
<b>Final vegetation standard met</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>
<b>Hydrology performance standard met for two consecutive years</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>
<b>Final approved delineation and monitoring report</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>

- a. If, after meeting all success criteria as specified in the Plan following the 5<sup>th</sup> year of monitoring, the Sponsor finds that the Bank has developed aquatic resource functions substantially in excess of those upon which the original credit totals and release schedule were based, the Sponsor may submit a written request to the Corps that the MBI be amended to reflect the changes in the number or type of credits.



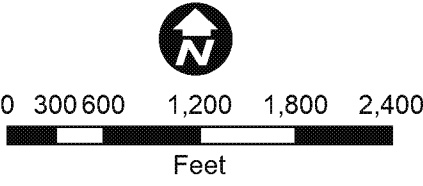
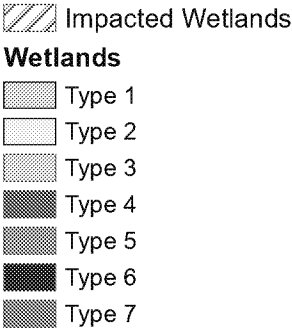









Figure 1b  
WETLAND IMPACTS - EAST  
Keetac Expansion Project  
U. S. Steel  
Keewatin, MN

Keetac Phase 2 Wetland and Deep Water Habitat Impacts.

Project Area	Wetland ID	Dominant Circular 39 Type	Total Wetland Area	Impact Shown in permit	Impact area (Permit Modification)	Notes/Comments	Dominant Community Type	Vegetative Diversity/ Quality	Overall Wetland Quality	Disturbance Type	Wetland Origin
Plant Area	7	5	86.74	6.09	6.09		Shallow Open Water	Low	Low	Plant area	Natural
Total Plant Area - Wetlands			86.74	6.09	6.09						
East Mine Pit Expansion	5	2	0.75	0.39	0.74	Ammendment 7/23/2012	Fresh (Wet) Meadow	High	Moderate	Utility corridor	Natural
East Mine Pit Expansion	7	5	86.74	80.65	80.65		Shallow Open Water	Low	Low		Natural
East Mine Pit Expansion	16	1	0.25	0.25	0.25		Seasonally Flooded Basin	Low	Low	Tailings basin	Incidental
East Mine Pit Expansion	2008_31	3	171.12	38.62	38.62	Monitored	Shallow Marsh	Moderate	Moderate	Impounded	Natural
East Mine Pit Expansion	2008_47	3	1.62	1.62	1.62		Shallow Marsh		Low	Ditch	Incidental
East Mine Pit Expansion	2008_52(North)	6	17.16	48.31	17.16	Re-Delineated 2012	Shrub-Carr	Moderate	Moderate	Inundated	Natural/Incidental
East Mine Pit Expansion	2008_53	4	77.28	48.19	48.19	Ammendment 7/23/2012	Deep Marsh	High	Moderate	Inundated	Natural/Incidental
East Mine Pit Expansion	2008_54	1	5.57	4.01	4.01	Ammendment 7/23/2012	Seasonally Flooded Basin	Low	Low	Road	Natural/Incidental
East Mine Pit Expansion	2008_55	2	0.73	0.73	0.73		Fresh (Wet) Meadow	Low	Low	Road	Incidental
East Mine Pit Expansion	2008_56	2	0.98	0.78	0.78	Ammendment 7/23/2012	Fresh (Wet) Meadow	Low	Low	Road	Natural/Incidental
East Mine Pit Expansion	2008_57	3	21.51	21.51	21.51		Shallow Marsh	Moderate	Moderate	Inundated, Road	Natural
East Mine Pit Expansion	2008_58	6	3.75	3.75	3.75		Shrub-Carr	Moderate	Moderate	Inundated	Natural
East Mine Pit Expansion	2008_60	6	0.14	0.14	0.14		Shrub-Carr				Natural
East Mine Pit Expansion	2008_62	6	0.17	0.17	0.17		Shrub-Carr	Low	Moderate	Dewatering flow, road	Incidental
East Mine Pit Expansion	2008_63	2	0.76	0.36	0.36	Ammendment 7/23/2012	Fresh (Wet) Meadow	Low	Moderate	Road, Dewatering	Incidental
East Mine Pit Expansion	32	3	1.65	1.65	1.65		Shallow Marsh	Moderate	Low	Tailings basin	Incidental
East Mine Pit Expansion	33	2	0.49	0.49	0.49		Fresh (Wet) Meadow	Low	Low	Tailings basin	Incidental
Total East Mine Pit Expansion - Wetlands			390.65	251.62	220.82						
South Mine Pit Expansion	2008_8	3	6.43	-	-	Shown in original table	Shallow Marsh	Low	Low	Railroad, road	Incidental
South Mine Pit Expansion	2008_9	3	6.43	-	-	Shown in original table	Shallow Marsh	Low	Low	Excavated	Incidental
South Mine Pit Expansion	2008_16	6	1.38	1.38	1.38		Shrub-Carr	Moderate	Moderate	Stockpile, road	Natural
South Mine Pit Expansion	2008_17	3	7.93	7.93	7.93		Shallow Marsh	Low	Moderate	Stockpile, road	Natural/Incidental
South Mine Pit Expansion	2008_18	6	0.08	0.08	0.08		Shrub-Carr	Low	Low	Excavated ditch	Incidental
South Mine Pit Expansion	2008_19	6	0.04	0.04	0.04		Shrub-Carr	Low	Low	Road	Incidental
South Mine Pit Expansion	2008_20	3	0.05	0.05	0.05		Shallow Marsh	Low	Low	Excavated	Incidental
South Mine Pit Expansion	2008_66	DW	17.18	17.18	17.18		Deep Water				Incidental
South Mine Pit Expansion	2008_69	DW	7.78	7.78	7.78		Deep Water				Incidental
Total South Mine Pit Expansion - Wetlands			9.49	9.48	9.48						
Total South Mine Pit Expansion - Deep water habitat			24.96	24.96	24.96						
East Stockpile Area	2008_13	6	17.82	-	-	Re-Delineated 2012, Monitored	Alder Thicket	Moderate	High		Natural
East Stockpile Area	2008_31	3	171.12	34.28	34.28	Monitored	Shallow Marsh	Moderate	Moderate	Impounded	Natural
East Stockpile Area	2008_33	6	21.05	-	-		Shrub-Carr	Moderate	High		Natural
East Stockpile Area	2008_34	2	0.04	-	-		Fresh (Wet) Meadow	Low	Low	Logged	Incidental
East Stockpile Area	2008_37	4	4.75	1.58	0.84	Re-Delineated 2012	Deep Marsh	Moderate	Low	Impounded	Natural
East Stockpile Area	2008_38	4	3.45	3.45	3.45		Deep Marsh	Moderate	Low	Impounded	Natural
East Stockpile Area	2008_39	5	98.55	98.55	98.55		Shallow Open Water	Moderate	Moderate	Impounded	Natural
East Stockpile Area	2008_40	5	135.37	135.37	135.37		Shallow Open Water	Moderate	Moderate	Impounded	Natural
East Stockpile Area	2008_41	5	40.58	1.84	0.14	Re-Delineated 2012, Monitored	Shallow Open Water	Moderate	Moderate	Impounded	Natural
East Stockpile Area	2008_43	3	0.14	0.14	0.14		Shallow Marsh	Low	Low	Excavated	Incidental
East Stockpile Area	2008_51	6	27.34	-	-		Shrub-Carr	Moderate	High	Impounded	Natural
Total East Stockpile Area - Wetlands			520.21	275.21	272.77						
South Stockpile	2008_14	3	0.45	0.45	0.45		Shallow Marsh	Moderate	Low	Partially excavated	Natural/Incidental
South Stockpile	2008_15	3	0.93	0.93	0.93		Shallow Marsh	High	Low	Excavated ditch	Incidental
South Stockpile	2008_44	7	9.53	9.53	9.53		Hardwood Swamp	Moderate	High		Natural
Total South Stockpile - Wetlands			10.91	10.91	10.91						
Tailings Basin Mitigation1	2	3	53.03	-	-	Shown in original table	Shallow Marsh				
Tailings Basin Mitigation1	3	4	22.81	-	-	Shown in original table	Deep Marsh				
Tailings Basin Mitigation1	4	4	15.42	-	-	Shown in original table	Deep Marsh				
Tailings Basin Mitigation1	5	3	1.91	-	-	Shown in original table	Shallow Marsh				
TotalTailings Basin Mitigation1 - Wetlands			93.17	-	-						
Total Wetlands			1111.17	553.31	520.07						
Total Deep water habitat			24.96	24.96	24.96						
Total -All Waters			1136.13	578.27	545.03						



-  Previous Mine Limits
-  Permit Extension
- Wetland Impacts**
-  Permanent Impacts
-  Temporary Impacts
-  Temporary Isolated Impacts

- Wetland Type**
-  2 = Wet Meadow/Sedge Meadow
  -  3 = Shallow Marsh
  -  6 = Shrub Carr/Alder Thicket
  -  7 = Hardwood Swamp



Feet  
200 0 200




Figure 1  
AS-BUILT WETLAND IMPACTS  
Number 6 Sump Project  
Minntac Mine  
U. S. Steel  
Mountain Iron, Minnesota

Barr Footer: ArcGIS 10.3, 2015-10-14 13:47 File: I:\Client\Minntac\Work Orders\Out of Scope\Costin Dump\Maps\Figure Existing Wetland Resources - East.mxd User: mjlw



- Previous Mine Limits
- Permit Extension

Wetland Impacts

- Permanent Impacts
- Temporary Impacts
- Temporary Isolated Impacts
- Permanent Impacts Inside
- Temporary Impacts Inside

Wetland Type

- 2 = Wet Meadow/Sedge Meadow
- 3 = Shallow Marsh
- 6 = Shrub Carr/Alder Thicket
- 7 = Hardwood Swamp



Feet

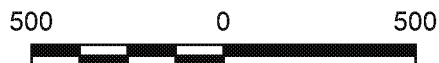
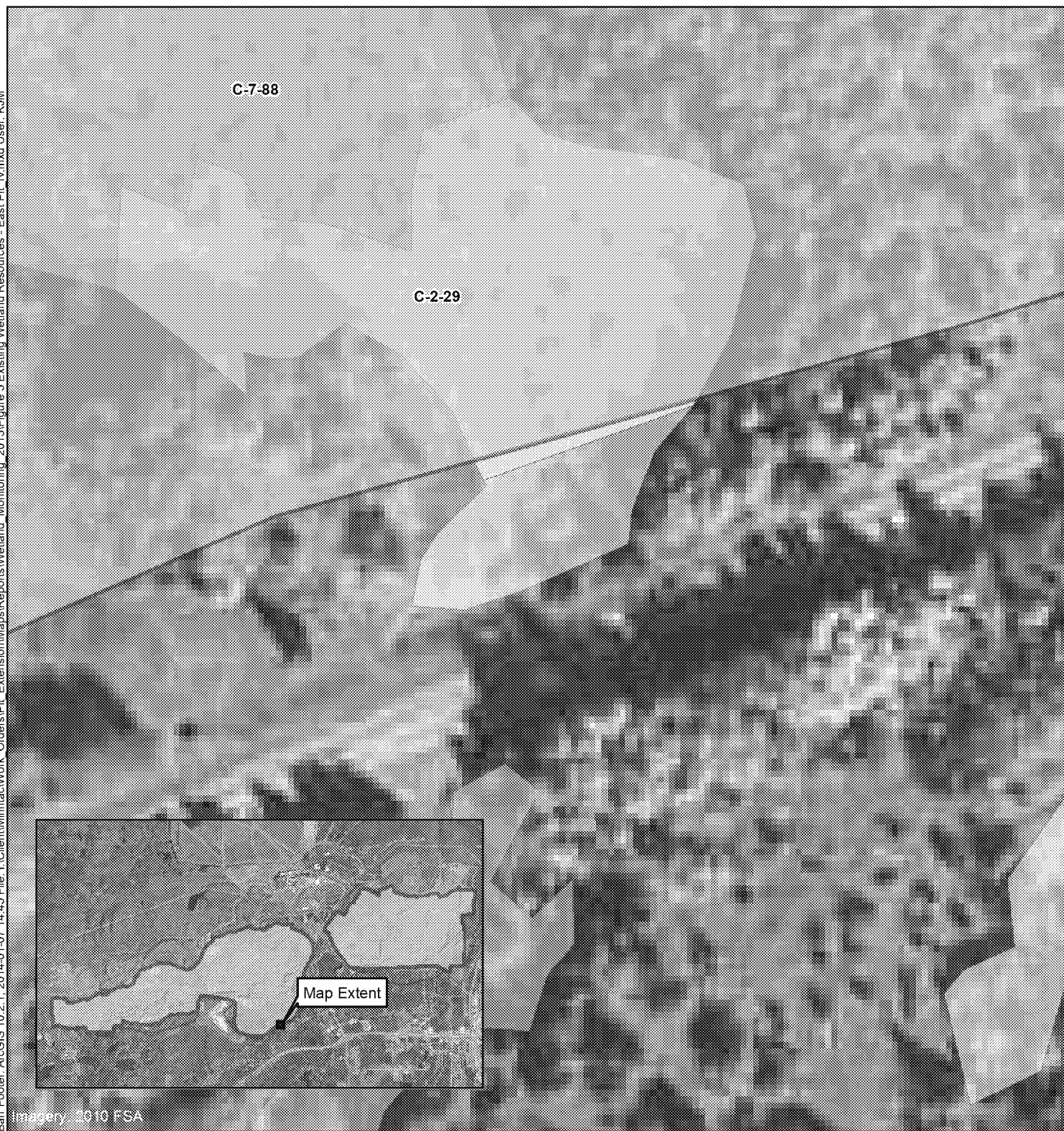










Figure 2

AS-BUILT WETLAND IMPACTS  
Number 6 Sump Project  
Minntac Mine  
U. S. Steel  
Mountain Iron, Minnesota



-  Previous Mine Limits
-  Permit Extension
- Wetland Impacts**
-  Permanent Impacts
-  Temporary Impacts
-  Temporary Isolated Impacts
-  Permanent Impacts Inside
-  Temporary Impacts Inside

- Wetland Type**
-  2 = Wet Meadow/Sedge Meadow
-  3 = Shallow Marsh
-  6 = Shrub Carr/Alder Thicket
-  7 = Hardwood Swamp

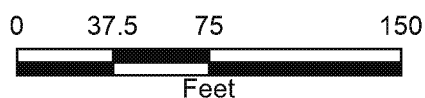
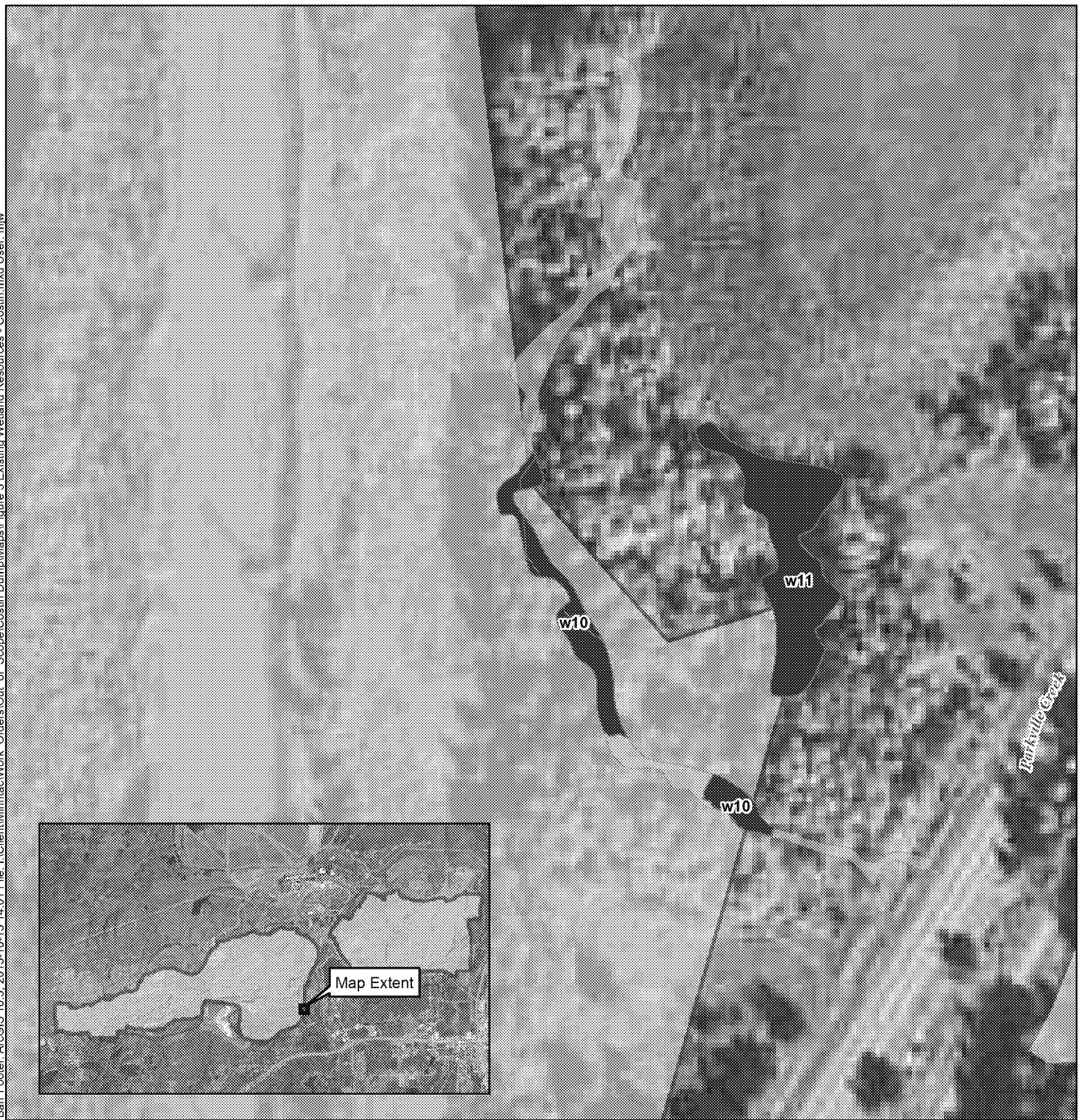


Figure 3

**AS-BUILT WETLAND IMPACTS**  
**Number 6 Sump Project**  
**Minntac Mine**  
**U. S. Steel**  
**Mountain Iron, Minnesota**



- Previous Mine Limits  
Permit Extension  
Wetland Impacts  
Permanent Impacts  
Temporary Impacts  
Isolated Impacts

- Wetland Type  
2 = Wet Meadow/Sedge Meadow  
3 = Shallow Marsh  
6 = Shrub Carr/Alder Thicket  
7 = Hardwood Swamp



Feet

100 0 100

Figure 4

AS-BUILT WETLAND IMPACTS  
Number 6 Sump Project  
Minntac Mine  
U. S. Steel  
Mountain Iron, Minnesota